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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dierk Schroder

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VENABLE LLP

P.O. BOX 34385

WASHINGTON, DC 20043-9998

EXAMINER

EDEL, JOHN B

ART UNIT

PAPER NUMBER

1731

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,089	Applicant(s) SCHRODER, DIERK	
	Examiner John B. Edel	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7, 15, and 16 recite the limitation "radiation receiver[.]" There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **1-4, 6-18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,432,600 to Grollimund et al. ("Grollimund") in view of United States Patent No. 3,334,240 to Black ("Black").

As for claim 1, Grollimund teaches:

- A "first" measuring device comprising:
 - A radiation source [light source 80 in figure 2],
 - A radiation receiver [camera 80 in figure 2], and
 - Radiation reflected off the multi-segmented filters [figure 2 generally],

but does not expressly teach a "second" measuring device arranged as claimed.

Black teaches:

- A "second" measuring device comprising:
 - A radiation source,
 - A radiation receiver within the conveying unit, and
 - Radiation through the multi segmented filters,

[figures 1 and 2]

At the time of the invention, it would have been obvious to a person having ordinary skill in the art of cigarette manufacture to supplement the inspection techniques of Grollimund with those taught by Black because Black teaches a complimentary form of inspection which gives information about the inside of the inspected rod.

As for claim 2, Black does not teach the internal inspection of rods on a drum conveyor, but one of ordinary skill in the art of cigarette manufacture would recognize

Art Unit: 1731

that the principle teaching of Black, passing radiation through a cigarette to determine its internal composition, could be applied with equal success regardless of whether the rods are moving transverse to their axial orientation or parallel to their axial orientation. As is taught by Grollmund [col. 6 lines 25-65], it is known to use a plurality of light sources in a linear configuration to illuminate rods being transported in a direction transverse to their axial orientation thus providing even light distribution over the rods. As a result, it would be obvious to provide a plurality of individual radiation sources in the manner claimed. The motivations for doing so at the time of invention would have been that internal inspection of cigarette rods on drums could provide important information about the internal composition of the rods on the drums and that a plurality of radiation sources as taught by Grollmund would benefit the quality of inspection by providing even light distribution.

As for claim 3, Grollmund discloses the light sources being LEDs [col. 6 lines 50-65].

As for claim 4, the application of the principles of Black to a drum conveyor would require a plurality of receiving elements as a matter of geometry comparable to the reasoning for supplying a plurality of light sources provided in the treatment of claim 2. The motivation for providing such an arrangement is that that Black teaches the desirability of sensing changes in light intensity along the length of the rod [abstract].

As for claim 6, the system described in claim 6 is obvious based on the art and reasoning presented in the rejection of claim 1.

As for claim 7, the uniform radiation of light was treated in the treatment of claim 1 and Black shows the radiation receiver integrated into a conveying element [figures 1 and 2].

As for claim 8, Grollimund shows an additional ("third") measuring device that uses reflective techniques [see elements 120a and 120b in figure 1].

As for claims 9-12, Grollimund teaches integration with a filter tipping machine downstream of the station for combining components [col. 4 lines 1-35].

As for claim 13, the station consists in part of drums [figure 1].

As for claim 14, the operation of system is such that radiation is delivered and received in measurable quantities [abstract].

As for claim 15, a plurality of receiving elements was covered in the treatment of claim 4.

As for claim 16, Grollimund teaches the use of CCD technology for the radiation receiver [col. 8 lines 10-20].

As for claim 17, it would be obvious to provide the filter tipping machine claimed based on the art and reasoning provided in the treatment of claims 1, 2 and 8-12.

As for claims 18 and 20, the operation of the device as treated in claim 17 would produce the method as claimed. Additionally, Grollimund teaches the discarding of non-conforming cigarettes [abstract].

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grollimund and Black as applied to claim 4 above, and further in view of United States

Art Unit: 1731

Pre Grant publication no. US 2001/0002864 to Nomura ("Nomura"). Nomura teaches what is not expressly taught by Grollimund and Black, namely that photodiodes may be used for converting optical signals into electrical signals. At the time of the invention, it would have been obvious to a person having ordinary skill in the art of light sensors to use photodiodes such as those used in Nomura because Nomura teaches their use in applications where an electrical signal is needed to correspond to a light signal.

Grollimund, Black and Nomura are analogous because Nomura relates to an issue of Grollimund and Black, namely what technologies are available for converting light signals into electrical signals.

Response to Arguments

Applicant's arguments filed April 18, 2007 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Black teaches a complimentary form of inspection that gives information about the inside of the inspected rod. A person having ordinary skill in the art of manufacturing cigarette would

Art Unit: 1731

find this information valuable and thus have sufficient motivation for incorporating the teachings of Black into the invention of Grollimund.

Applicant argues that Black teaches illuminating a focused spot on the rod. This argument is unpersuasive for two reasons. First, the operation of Black is such that the movement of the rod produces "essentially uniform" radiation along the rod, therefore reading on the claim. Second, as combined with Grollimund in the treatment of claim 2 above the device acts in manner substantially the same as applicants preferred embodiment.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Edel whose telephone number is (571) 272-4804. The examiner can normally be reached on 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JBE


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700